Frimley Health
NHS Foundation Trust

Management of Late Preterm and Low Birth Weight Babies on the Postnatal Ward & Transitional Care Unit

Key Points

- Late preterm (34-37/40)
- Low birth weight babies <2nd according to WHO (World Health Organisation) chart table 1
- Infants to be cared for alongside their mothers on the appropriate ward in accordance with ward guidelines
- Input from Paediatric and Midwifery staff
- Length of stay according to gestation

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Abbreviations

NEWTT	Newborn early warning trigger and track
NG	Naso gastric
TCU	Transitional Care Unit

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1. INTRODUCTION

Late preterm (34-37 gestation) and low birth weight (as per WHO chart - Appendix 1) infants can be cared for alongside their mothers on the Postnatal Ward or Transitional Care Unit (TCU). These babies need additional attention from midwifery and paediatric staff due to them being at an increased risk from the following neonatal challenges:

- Thermoregulation/hypothermia
- Hypoglycaemia
- Feeding difficulties
- Jaundice
- Increased weight loss

2. GENERAL MANAGEMENT

2.1 Thermoregulation

- Keep baby warm (36.5-37.5). Parents to be informed on how to maintain baby's temperature.
- Skin to skin contact with the mother is the best method for maintaining the baby's temperature whilst also supporting the development of a close and responsive relationship between mother and baby. Mothers should be supported and encouraged to hold their baby in skin to skin contact as much as possible with the baby wearing a hat and covered by a blanket. The room should be draught-free, with all windows closed.
- If the baby's temperature is <36.5 and skin to skin is not possible, the Hot Cot can be used following Hot Cot guidance. This can be found under flowsheets in EPIC.
- Babies should be on the hot cot with one layer of clothing only and a hat, then blanket over top of baby. Temperature of cot should be set at 37 degrees and baby temperature taken every 2 hours. When baby has maintained temp >36.7 on 2 or more occasions then reduce temperature of the hot cot by 1 degrees every 2 hours. Turn hot cot off ONLY when baby temperature is stable and hot cot has been 34 for 2 hours. If temperature out of range or not maintaining temperatures, then paediatric team MUST be contacted. This has been agreed in conjunction with NNU. This does not replace the baby observation chart; this must be completed in conjunction with it. If the baby does not improve when set at 37, then decision with paediatrician should be made to increase hot cot temperature to 38 degrees.
- Paediatric input will be required if the baby is unable to maintain their temperature despite skin to skin or Hot Cot use.
- Monitoring of temperature for first 24 hours in accordance with the guidance below (section 2.2) for gestation.

2.2 Observations

- On admission to the ward a full set of observations to be plotted on NEWTT chart.
- Monitor pre-feed blood sugars in accordance with the Neonatal hypoglycaemia guideline and in conjunction with a full set of observations.
- 4 hourly observations on baby to at least 24 hours of life, longer if deemed necessary: if these are within normal parameters then they can stop.
- If any abnormal observations, then paediatric team and midwife in charge should be informed straight away.
- ICON to be discussed with the parents. Any safeguarding plans should be discussed.

2.3 Hypoglycaemia

- The preterm baby will require blood sugar monitoring following Flowchart A of the hypoglycaemia guideline. A full set of observations should be taken with all BMs to enable the whole picture of baby's conditions to be monitored. Once stable, to continue observations as per above.

2.4 Jaundice

- All babies ≤37 weeks should have a baseline bilirubin check once over 24 hours of life. Transcutaneous Bilirubinometer (TBR) can be used for babies born between 35-37 weeks' gestation. A serum bilirubin blood sample (SBR) should be taken for all babies <35 weeks' gestation. Results should be plotted on EPIC the appropriate chart viewed and actioned following the Neonatal Jaundice guideline.
- Follow up jaundice monitoring can be completed in the community or appropriate clinic (site dependent). Community midwives should provide continuity of care and should be overseeing all care provided by maternity support workers.

3. FEEDING

Encourage early and frequent feeding, consider an active feeding plan (Appendix 2)

3.1 If Breast Feeding

1. Support mother and baby to have skin to skin as soon as possible after birth and for as long as possible for a minimum of 1 hour or until the first feed.
2. If baby does not attach and breastfeed within the first hour, then teach the mother to hand express and give any colostrum obtained.
3. Teach the parents feeding cues and advise them to observe for these whilst supporting the mother to continue skin to skin, offering the breast and expressing colostrum 1-2 hourly.

4. If showing feeding cues and able to attach to the breast, then encourage minimum of 3 hourly feeding and complete a breastfeeding assessment to ensure feeding effectively.
5. If baby does not show feeding cues, then advise the mother to attempt to wake the baby and offer the breast 2-3 hourly. If baby does not attach, then the mother should continue to hand express and give any Expressed Brest Milk (EBM) obtained.
6. If minimal/no colostrum, then supplementation with formula will be necessary following the recommended volume in Appendix 2. Initial supplementation should always via a cup to help preserve the breastfeeding relationship. Please note that cup feeding is not suitable for infants less than 35 weeks gestation therefore 34-week infants would need bottle/tube feeds instead.
7. If baby is not well enough to cup feed effectively, then consider teat and bottle feeding in the short term. Teach parents paced bottle feeding.
8. If baby is showing feeding cues and unable to take supplement via cup or bottle effectively, the baby will need reviewing by the paediatric team and moved to Transitional Care Unit (TCU), if not already there, for NG feeding
9. Support the mother to hand express and /or use an electric pump 3 hourly to continue obtaining any colostrum and to provide the breast stimulation necessary to develop her supply.
10. Syringe feeding shouldn't be used for volumes in excess of 5 mls - cup feeding can be used for volumes up to 20ml.

3.2 If Artificially Feeding

1. Support mother and baby to have skin to skin as soon as possible after birth and for as long as possible, for a minimum of 1 hour or until the first feed.
2. Support the mother to offer the first feed in skin-to-skin contact within the first 1-2 hours of life. Teach the parents paced bottle feeding.
3. Teach parents to observe for feeding cues and respond to these. If baby not showing cues, then advise offering the bottle at least 2-3 hourly following the recommended volumes in Appendix 2.
4. Reassure parents that these are guided amounts and that some babies will take smaller volumes but more frequently.
5. Continue to encourage mothers to have prolonged periods of skin to skin to improve temperature maintenance, baby wellbeing and to promote the development of a close and responsive relationship.

For all babies under ≤37 weeks' gestation, keep accurate feeding records using the feeding charts. This can be found on EPIC under Flowsheets > NICU Nutrition Eval/Plan.

4. MEDICAL REVIEW

37 weeks/≤ birth weight indicated on WHO chart (Appendix 1).

- Will only need medical review if deemed necessary by a midwife.

35-36 weeks

- Review by paediatric SHO within 12 hours of delivery (earlier if any concerns)
- If baby on Transitional Care, then daily review by paediatric team; if on postnatal ward, paediatric team to be contacted if observations become abnormal or any other concerns. Maternity staff to follow the length of stay guidance.
- NIPE (Newborn & Infant Physical Examination) should be completed by the paediatric team as per the NIPE guideline. The NIPE midwife can perform the NIPE on babies ≥35 but is recommended that this is done by the paediatric team. This is to minimise the risk of hypothermia through multiple undressing's of the baby.
- When admitted to the Transitional Care unit these babies should be reviewed by paediatric SHO within 4 hours of delivery and Registrar with 24 hours (earlier if problems).
- Daily review by paediatric team, to be seen by Registrar prior to discharge; length of stay guidance to be followed.

5. LENGTH OF STAY

37 weeks and/or ≤ birth weight indicated on WHO chart (Appendix 1)

- At least 24 hours – after 24 hours if baby meeting criteria for discharge they can go home under paediatric advice if deemed necessary returning at appropriate time for SBR etc.

36 weeks

- At least 48 hours

34-35/≥1700g

- At least 96 hours

These are minimum requirements only; some babies, particularly multiple births, may need longer.

6. CRITERIA FOR DISCHARGE

- Maintaining temperature 36.5 or above in a cot for 24 hours
- Feeding well >24 hours, this means

1. Waking for feeds & showing feeding cues. Tolerating feeds with minimal vomiting.
2. Having a minimum of 8 feeds in 24 hours.
3. Output is appropriate and mother is encouraged to seek help with feeding should wet nappies or stooling be less than expected.
4. The baby has been assessed for effective breastfeeding & mum knows to offer both breasts each feed and use breast compression to ensure effective feeding.
5. If there are concerns raised during the breastfeeding assessment, then a tongue tie has been excluded by the infant feeding team.
6. The mother is aware of local and national support available.
7. Day 3 weight should be arranged either as an inpatient or in community and appropriate actions taken for weight loss.

APPENDIX 1: WHO BIRTH WEIGHT CHART

Birth weight on 2nd centile / kg according to WHO charts		
Gestational age / weeks	Boys	Girls
37	**2.10**	**2.00**
38	**2.30**	**2.20**
39	**2.50**	**2.45**
40	**2.65**	**2.60**
41	**2.80**	**2.75**
42	**2.90**	**2.85**

OR LESS THAN THE 2ND CENTILE ON GAP AND GROW

APPENDIX 2: CALCULATIONS OF VOLUME OF FEEDS FOR LBW INFANTS, PRETERM INFANTS, SGA INFANTS AND TERM FORMULA FED INFANTS

N.B. This excludes the term healthy breastfed infant who is reluctant to breastfeed.

LBW infants, preterm infants, SGA infants, term formula fed infants

Day 0 60ml/kg/day
Day 1 90ml/kg/day
Day 2 120ml/kg/day
Day 3 150ml/kg/day

For ALL babies, assess for:

- Colour
- Tone
- Alertness
- Maintenance of temperature
- General well-being

Calculation:

Volume × BW in kg ÷ number of feeds over 24 hrs

Example: 90ml × 3.237 ÷ 8 (3 hourly feeding) = 36.4ml
Example: 120ml × 3.900 ÷ 6 (4 hourly feeding) = 78ml

The volume calculated is an average volume – some infants will take more, some less.

Always assess each individual infant and observe for clinical signs of well-being.

Monitor urinary output and frequency and colour of bowel movements.

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Full Version Control

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This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt, contact a senior colleague or expert. Caution is advised when using guidelines after the review date.
This guideline is for use in Frimley Health Trust hospitals only. Any use outside this location will not be supported by the Trust and will be at the risk of the individual using it.

Version History

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1.0	June 2020	S Thomson, Postnatal Lead Midwife, WPH	Final	First Cross Site Version
2.0	January 2024	S Thomson, Postnatal Lead Midwife, WPH	Final	Second version

Related Documents

Document Type	Document Name
Guideline	Infant Feeding Policy
Guideline	Neonatal hypoglycaemia (Management on Maternity Wards)
Guideline	Management of Neonatal Jaundice